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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
DIVECHA, KAMAL B	

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/971,857	SYMONS ET AL.	
	Examiner	Art Unit	
	KAMAL B. DIVECHA	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Claims 1-27 are pending in this application.

Applicant's arguments filed October 24, 2005 have been fully considered but they are not persuasive.

New matter has been added to the claims as a result of the claim amendments (see the action below).

35 U. S. C. 102 Rejections

In response to applicant arguments (remarks, pg. 8) that Arkko does not teach or suggest the "storing or comparing of an expected network infrastructure comprising an expected physical topography and an expected logical topography as recited in claims 1, 10 and 19 of the present invention, Examiner disagrees.

Applicant specification suggests that the logical topology of the network infrastructure (e.g. physical environment) is created or changed by management system using configuration agent (pg. 9 L14-16). In other words, the specification suggests that the physical environment is treated as a one of a logical topology as indicated by the example.

Arkko explicitly discloses the process of storing the expected network infrastructure description, wherein the expected network infrastructure description comprises an expected physical topography, which is same as expected logical topography (see fig. 5A item #505, col. 2 L35-65: the physical topography includes expected device connections) and further discloses the process of comparing the expected device connections with the actual current connections (i.e. comparing expected network infrastructure description with a current network infrastructure description wherein the current network infrastructure comprises current physical topography,

i.e. the current device connections, which as per applicant specification, is same as current logical topography, col. 2 L35-65 and fig. 5A item #510, 515). Arkko clearly teaches the process of recording or storing the expected device connections (i.e. physical topography, which is same as logical topography, col. 2 L62-65). Therefore Arkko does teach the process as set forth above.

In any event, even if Arkko did not explicitly suggested that the expected network infrastructure description comprises an expected physical topography and an expected logical topography, and current network infrastructure description comprises a current physical topography and a current logical topography, the phrase "network topology" in Arkko should have been inherently interpreted as to include physical and logical topography, simply because the phrase topology is defined to include configuration and/or layout of network formed by connections between the devices.

Further applicant failed to explicitly define in the disclosure the intended teaching of the "expected physical topography", "expected logical topography", "current physical topography" and "current logical topography". Therefore Examiner can interpret the expected and current number and/or location of the processing devices (Arkko, col. 2 L35-36) to be expected and current physical topography and the expected and current device connections (Arkko, col. 2 L61-65) to be expected and current logical topography.

To conclude, the expected network infrastructure description of Arkko does include expected physical topography (i.e. the number and/or location of the processing devices in expected network topology, Arkko, col. 2 L35-36) and expect logical topography (i.e. expected device connections, Arkko, col. 2 L61-65); and the current network infrastructure description of Arkko does include current physical topography (i.e. the number and/or location of the

processing devices in the current network topology, Arkko, col. 2 L35-40) and current logical topography (i.e. current device connections, Arkko, col. 2 L61-65).

Based on the above discussion, it is clearly noted that Arkko does teach and suggest the process of comparing the expected network infrastructure description with a current network infrastructure description comprising a current physical topography and current logical topography (see Arkko, col. 2 L20-65, fig. 5A step #505, 510 and 515).

35 U. S. C. 103 Rejections

As discussed above, Arkko does disclose and teach storing and comparing an expected physical topography and an expected logical topography with a corresponding current physical topography and current logical topography as recited in claims 1, 10 and 19.

In response to applicant argument that Miyake does not teach the process of converting said expected network infrastructure description into an expected network infrastructure graphical description and converting said current network infrastructure description into a current network infrastructure graphical description (remarks, pg. 10), Examiner disagrees.

Miyake explicitly teaches and discloses the process wherein the 2 dimensional data (i.e. text data) is converted to a 3 dimensional view (i.e. graphical view, fig. 58-83; pg. 2 [0021, 0026]; pg. 3 [0032]; pg. 4 [0089]).

Fig. 58-83 shows the process of changing and/or converting the 2D data into the 3D view in a separate window. For example: fig. 80 shows that the text data on the first window, item #19, and the graphical version of the data in the first window is displayed in the second window, item #20 i.e. the tree data is converted and the graphical representation of the tree data is displayed.

Therefore the combination of the Arkko and Miyake does result the subject matter claimed in claims 6, 15 and 24.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (remarks, pg. 11-12), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

To conclude, the combination of Arkko, Miyake, Benfield and Fitsgerald discloses, teaches and suggests each and every limitation of the claimed subject matter of the present application. As such the Rejection is maintained.

DETAILED ACTION

Claims 1-27 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of **the first paragraph of 35 U.S.C. 112:**

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims recite the limitation of "wherein said expected network infrastructure description comprises an expected physical topography and an expected logical topography; and the limitation of "wherein said current network infrastructure description comprises a current physical topography and a current logical topography". However, the specification merely describes a database for storing an expected network infrastructure (pg. 9 L. 12-13). The specification further suggests that the first phase of the present invention involves collecting the expected network infrastructure description and the current network infrastructure description (pg. 10 L5-11) and in the second phase (fig. 3B), device in the current infrastructure description are compared to devices in the expected infrastructure description (pg. 10 L11-15). There is no whatsoever any indication or suggestion about storing an expected network infrastructure description, **wherein said expected network infrastructure description comprises an expected physical topography and an expected logical topography** and comparing said expected network infrastructure description with a current network infrastructure description, **wherein said current network infrastructure description comprises a current physical topography and a current logical topography**. As such, the above claimed limitation presents new subject matter situations and was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following is a quotation of **the second paragraph of 35 U.S.C. 112:**

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "topography" is defined as following (based upon the American Heritage, College Dictionary, Fourth Edition, ISBN 0-618-09848-8, pg. 1450):

a. Detailed precise description of a place or a region.

b. Graphical representation of surface features of a place or a region on a map.

c. A description of a structured entity, etc.

Therefore, the phrase "topography" renders the claim indefinite because applicant failed to distinctly provide, indicate or convey the intended teaching of the phrase i.e. whether the phrase "topography" is directed to the graphical representation or is directed to the detailed description of the network, etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 10-14 and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Arkko et al. (hereinafter Arkko, U. S. Patent No. 6,535,517 B1).

As per claim 1, Arkko explicitly discloses a method for managing a network infrastructure comprising: storing an expected network infrastructure description (fig. 5A item #505, col. 9 L6-7), and wherein said expected network infrastructure description comprises an expected physical topography and an expected logical topography (as per applicant specification pg. 9 L12-16, the logical and physical topography is same, col. 2 L35-36, L61-65 and fig. 5A item #505: shows storing of the expected network topology wherein expected topology includes expected physical topography such as the number and/or location of processing devices associated with the expected network topology, device connections, which are also interpreted as expected logical topography according to applicant); comparing said expected network infrastructure description with a current network infrastructure description (col. 9 L15-18, col. 2 L35-40, L62-65), and wherein said current network infrastructure description comprises a current physical topography and a current logical topography (col. 2 L20-65: shows the process of comparing expected device connections with the actual device connections); and outputting a result of said comparing, wherein differences between said expected network infrastructure description and said current network infrastructure disruption are displayed (col. 14 L14-16 and col. 13 L1-23).

As per claim 2, Arkko discloses a system wherein the network infrastructure is a switched network infrastructure (fig. 1-4 and col. 3 L50-67).

As per claim 3, Arkko discloses the process of implementing a change of said network infrastructure with a configuration agent and storing said change in said expected network infrastructure description (col. 9 L46-57 and col. 14 L32-34).

As per claim 4, Arkko discloses the process of collecting said current network infrastructure description (col. 10 L21 to col. 12 L24).

As per claim 5, Arkko discloses the process wherein said collecting current network infrastructure description further comprises using agents to collect said current network infrastructure description (col. 10 L21 to col. 12 L24).

As per claims 10-14 and 19-23, they do not teach or further define over the limitations in claims 1-5. Therefore, claims 10-14 and 19-23 are rejected for the same reasons as set forth in claims 1-5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 6, 15 and 24 are rejected under 35 U.S.C. 103(a) as being obvious over Arkko et al. (hereinafter Arkko, U. S. Patent No. 6,535,517 B1) in view of Miyake et al. (hereinafter Miyake, Pub. No. US 2001/0042118 A1).

As per claim 6, Arkko does not explicitly disclose the process of converting said expected network infrastructure description into an expected network infrastructure graphical description and converting said current network infrastructure description into a current network infrastructure graphical description. Miyake, from the same field of endeavor, explicitly discloses the process of displaying two-dimensional data in a two-dimensional display area and all portion of the two-dimensionally displayed data is displayed three-dimensionally in a three-dimensionally area (read as network infrastructure description is converted to network infrastructure graphical representation, see abstract; fig. 27 and fig. 68 item #32 displayed graphically as item #47; fig. 58-83; pg. 2 [0021], [0026]; pg. 3 [0032]). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Arkko in view of Miyake, in order to convert the expected and current network infrastructure description to the expected and current network infrastructure graphical description, since Miyake teaches the process of changing the 2-dimensional data to 3-dimensional graphical view.

One of ordinary skilled in the art would have been motivated because it would have enabled a control for displaying each of the plurality of types of logical network topologies on the display means (i.e. graphical display), wherein all of the plurality of types of logical network

topologies can be uniformly managed (Miyake, pg. 2 [0021]) and further it would have implemented the capability of displaying a network topology situation for a network manager (Miyake, pg. 4 [0089]).

As per claims 15 and 24, they do not teach or further define over the limitations in claim 6. Therefore, claims 15 and 24 are rejected for the same reasons as set forth in claim 6.

5. Claims 7, 16 and 25 are rejected under 35 U.S.C. 103(a) as being obvious over Arkko et al. (hereinafter Arkko, U. S. Patent No. 6,535,517 B1) in view of Miyake et al. (hereinafter Miyake, Pub. No. US 2001/0042118 A1), and further in view of Benfield et al. (hereinafter Benfield, Pub. No.: US 2003/0009552 A1).

As per claim 7, Arkko in view of Miyake does not explicitly disclose the process of comparing said expected network infrastructure graphical description with said current network infrastructure graphical description.

Benfield, from the same field of endeavor, discloses the process of comparing topology maps of two different states (read as comparing two graphical representation of network infrastructure, pg. 17 block #218-223). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Arkko in view of Miyake, and further in view of Benfield, by incorporating the teaching of Benfield as stated above, in order to compare expected network infrastructure graphical description with current network infrastructure graphical description.

One of ordinary skilled in the art would have been motivated because any changes in network topology would have been displayed using graphical changes such that user would have

easily discerned the topology changes and/or an administrative user would have been able to view one or more changes in topology over a period of time (Benfield, pg. 17 block #220, 222).

As per claims 16 and 25, they do not teach or further define over the limitations in claim 7. Therefore, claims 16 and 25 are rejected for the same reasons as set forth in claim 7.

6. Claims 8, 17 and 26 are rejected under 35 U.S.C. 103(a) as being obvious over Arkko et al. (hereinafter Arkko, U. S. Patent No. 6,535,517 B1) in view of Fitzgerald et al. (hereinafter Fitzgerald, U. S. Patent No. 5,581,764).

As per claim 8, Arkko does not explicitly disclose the process of outputting a list of devices from said expected network infrastructure description which are missing from said current network infrastructure description, outputting a list of devices from said current network infrastructure description having a different configuration from the configuration of said devices in said expected network infrastructure description and outputting a list of devices from said current network infrastructure description which are not described in said expected network infrastructure description.

Fitzgerald, from the same field of endeavor, discloses the method of comparing a Should have list (SH, read as expected network infrastructure description) and Already have list (AH, read as current network infrastructure description) of network resources (fig. 24 block #98) and based on comparison, generating (read as outputting) a Need List that identifies items that are present in the AH list but absent from SH list (col. 5 L10-30). A Need list also identifies resource deletions, additions, and updates necessary to configure a desktop (read as list which identifies the missing component, not described component and component with different configuration in either expected or current network infrastructure description, fig. 24 item #98

and #100 and fig. 25 item #112, #114, #116 and #118; fig. 3 considering an update function for a device with different configuration, delete function for a deleting devices or resources that are missing from current network infrastructure description and adding function for adding resources that are not described in expected network infrastructure description or Should have list; col. 5 L10-57). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Arkko in view of Fitzgerald, in order to output a list of devices that are missing from current network infrastructure description, devices or resources having a different configuration from expected configuration and devices that are not described in expected network infrastructure description.

One of ordinary skilled in the art would have been motivated because doing would have automated and enabled the management of changes in a distributed computing environment (Fitzgerald, col. 8 L15-21). It would have also articulated and managed the specific system configuration requirements and would have further permitted dynamic reconfiguration of a system based upon policy changes and system technology configuration changes (Fitzgerald, col. 7 L30-35). Also, it would have enabled resource deletions, additions, and updates necessary to configure computer systems in accordance with administrator requirements (Fitzgerald, col. 5 L35-40).

As per claims 17 and 26, they do not teach or further define over the limitations in claim 8. Therefore, claims 17 and 26 are rejected for the same reasons as set forth in claim 8.

7. Claims 9, 18 and 27 are rejected under 35 U.S.C. 103(a) as being obvious over Arkko et al. (hereinafter Arkko, U. S. Patent No. 6,535,517 B1) in view of Burgess et al (hereinafter Burgess, U. S. Patent No. 5,696,701).

As per claim 9, Arkko does not disclose the process of outputting a message stating that expected network infrastructure description and current network infrastructure description are identical. Burgess discloses the process of outputting a message indicating that an event has occurred, wherein the message includes data about the event (col. 6 L18-25). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Arkko in view of Burgess, in order to output a message stating expected and current infrastructure description are identical. One of ordinary skilled in the art would have been motivated because it would have informed and/or notified the network administrator about the status of the network infrastructure and/or changes occurred in the network infrastructure if there are any.

As per claims 18 and 27, they do not teach or further define over the limitations in claim 9. Therefore, claims 18 and 27 are rejected for the same reasons as set forth in claim 9.

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Huang et al., U. S. Patent No. 6,735,548 B1.

b. Tezuka et al., U. S. Patent No. 6,047,320.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KD:

December 7, 2005.

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER